

GEORGE WRAGGE

WARDRY: METAL
WORKS
SALFORD
MANCHESTER:
22 SURREY: STRAND
SCREEN
LONDON: W.C.



METAL: CASEMENTS
AND
FRAMES WROUGHT: IRON

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All previous Lists are hereby cancelled.

Wardry Metal Works, Salford,
Manchester, May, 1898.



DEAR SIR,

In presenting this Catalogue to the Architectural Profession I have endeavoured, with Mr. Edgar Wood's assistance (which I gratefully acknowledge) to provide for the increasing enquiries for ARTISTIC and INTERESTING Metal Work in all its varieties, and I hope by the way in which this has been done that this Catalogue may have a value beyond that of the ordinary commercial type.

In addition, I have tried to make the work as comprehensive and as easy of reference as possible; a complete index will be found on page 6, while the title page preceding each Department gives some details of its particular section.

That portion of the Catalogue relating to metal casements is carefully priced and detailed; it was, however, thought undesirable to price the metal work portion of the book, but in this case merely to illustrate suggestions and give an idea of the feeling I am anxious to introduce into this most interesting Department.

It will be noticed that in the casement section, and indeed throughout the book, the drawings shew the "application" of the various articles; this, in addition to lending interest to the various pages, will doubtless be helpful to the architect and client in making their selection.

I take this opportunity of inviting you to visit my workshops to see the work in progress, and to form your own judgment as to the capabilities of my establishment.

Yours faithfully,

George Wardry.

Registered No. 503

To M^r J. Wood & Co. Ltd.
Birmingham

With Compliments.

INDEX.

Attention is drawn to the Index (page 6), where easy reference can be made to the various articles illustrated.

TERMS.

All goods to be packed and delivered free on rails Manchester. Payments to be made at the rate of 80 per cent. of the total value on delivery, and the balance in one month, or subject to special arrangement. All cases to be returned in good condition, carriage paid, within 14 days from receipt of goods.

ORDERING.

When ordering Metal Casements, the section should be stated, and the Nos. of the designs of the fittings (see pages 37 to 47), if differing from those specified. The sizes should be given nett "daylight," and full size details of the jambs, head and sill sent, shewing which is outside. The "hands" also should be given if Side Hung Casements, and notification should be made as to whether clear glass or leaded glazing is to be used. An order sheet, shewing example, will be posted on application. Measurements will be taken by a member of our staff free of charge where the order is of sufficient magnitude to cover his expenses.

GENERAL REMARKS.

Each section of Casement is drawn full size, as well as the details of the rebates which are recommended. The Casements can be fitted to grooved or other details. Those sections having GROOVED outer frames are specially designed to overcome difficulties in this respect. A description is given on each page of illustrations.

Casements for highest class work are illustrated on pages 9 to 19, and those of simpler form on pages 21 to 31.

A comparative price list is given on pages 32 and 33.

Each form of Casement is illustrated on page 49.

Each section is rolled in BRONZE, and special estimates will be given on receipt of specification and quantities.

All fittings are interchangeable, and are made on the premises.

The fixing of Casements requires careful attention; a separate staff is retained for this purpose, and clients will be well advised to ask for an estimate for this portion of the work.

The GLAZING, too, is important. Glaziers' putty should on no account be used, but an oil mastic cement (separate list for mastic cement will be posted). An estimate will be given for the glazing in clear glass or leaded work.

SASHES, see pages 51, 52, 53, 54, and 55.

The matter on pages 4 and 5 speaks for itself.

GEARING is specially dealt with on page 50.

METAL WORK. This is a big department. Particular attention is drawn to the illustrations (see pages 57 and onwards).

LEADED LIGHTS, see page 93. A separate Catalogue will be posted free on application.

The following is an abbreviated LIST OF BUILDINGS where our Casements & Sashes have recently been or are now being supplied.

CASEMENTS & FRAMES.

NEW TECHNICAL SCHOOLS, MANCHESTER.
(Some hundreds of our best sections.)

ROYAL ASYLUM, CHEADLE.

CHRISTIE LIBRARY, OWENS COLLEGE.

GOVERNMENT BUILDINGS, DUBLIN.

ROYAL INFIRMARY, BRISTOL.

ROSS HOSPITAL, HEREFORDSHIRE.

NEW MEDICAL SCHOOL, MIDDLESEX
HOSPITAL.

BROOK HOSPITAL, LONDON.

SOUTH WESTERN do.

SOUTH EASTERN do.

(Several thousand Casements in all of our No. 13 section, page 9.)

EAST LANCASHIRE INFIRMARY,
BLACKBURN.

THE NEW TRAMWAY OFFICES, DUBLIN.

COTTAGE HOMES, STYAL.

NEW GRAND ARCADES, LEEDS.

NEW SANATORIUM, ASTLEY, LANCASHIRE.

MONASTERY, ERDINGTON, BIRMINGHAM.

NATIONAL PROVINCIAL BANK, LEEDS.

PARR'S BANK—BRANCHES, viz:—
ST. MARTIN'S LANE; HIGHGATE; EARL'S
COURT ROAD.

HOTEL METROPOLÉ, BLACKPOOL.

SCHOOLS AT WEST TWERTON, NELSON,
BLACKPOOL, BATH, &c., &c., AND AT
NUMEROUS CHURCHES.

RESIDENCE AT LOCUST AVENUE, PHILA-
DELPHIA.

(Upwards of 230 of our No. 20 section BRONZE
Casements, page 11, are now being supplied to this
mansion.)

BLACKHEATH PARK, LONDON.

SIR ARTHUR SASSOON'S HOUSE, PARK LANE.

HARPENDEN, SURREY; CHURCH STRETTON;

LINGFIELD, SURREY; ACOMB HALL, YORK.

CLAVERTON HALL, BATH.

BRIDGEWATER HOUSE, LONDON.

WARDLEY HALL, WORSLEY.

JOHNBY HALL, CUMBERLAND.

FARMINGWOODS HALL, NORTHAMPTON.

AND AT EASTBOURNE, ISLE OF WIGHT,
EDINBURGH, YORK, &c.

OFFICES OF THE LINOTYPE WORKS.

(A large number of our No. 20 section BRONZE
Casements, page 11, have been fixed at these
Offices.)

STEEL SASHES.

MESSRS. VERNON'S FLOUR MILLS,
BIRKENHEAD.

(Over 20,000 superficial ft. of our zin. regd. bar, No. 30,
page 53, and 250 casements have been supplied to
these buildings.)

THE GENERAL ELECTRIC CO.'S WORKS,
MANCHESTER.

(Over 10,000 ft. zin. section, and 200 casements.)

MESSRS. WORRALL'S DYE WORKS.

(Over 12,000 ft. zin. section, and 300 casements.)

MESSRS. MAGEE, MARSHALL & CO'S
BREWERIES AND BONDED STORES,
BOLTON.

(Over 10,000 ft. 1 1/2 in. section No. 16, page 53.)

NEW TELEGRAPH FACTORY, BOVAY PLACE,
LONDON, FOR H.M. OFFICE OF WORKS.

POST OFFICE, CARDIFF, FOR H.M. OFFICE
OF WORKS.

POST OFFICE, WEST HARTLEPOOL, do.

INK WORKS, HORNSEY.

WHITE WEBB'S PUMPING STATION,
ENFIELD (NEW RIVER CO.)

NEW WAREHOUSE, MANCHESTER, FOR

MESSRS. JOHNSON, CLAPHAM & MORRIS.

SCHOOLS, APPLETON, BOLTON, STOCKTON,

ABERDEEN, &c., &c.

NEW RIVER CO.'S ENGINE HOUSE,

CLERKENWELL.

MESSRS. FRY'S NEW FACTORY,

LONDON, E.C.

MESSRS. GOODALLS & SONS' FACTORY,

LONDON, N.W.; AND MANY OTHERS.

METAL WORK.

NATIONAL PROVINCIAL BANK, LEEDS.

(In Aluminium throughout.)

MERCANTILE BANK OF LANCASHIRE

(HEAD OFFICES).

BANK OF LIVERPOOL (HEAD OFFICES).

MANCHESTER & COUNTY BANK, SOUTH-

PORT. (Also the Casements.)

CAPITAL & COUNTIES BANK, BATH.

MANSION, ST. HELENS, DUBLIN.

BATH CORPORATION.

(Over 50 Bronze Tablets to designs by their architects,
Messrs. Silcock & Reay.)

HOTEL METROPOLÉ, BLACKPOOL.

THE TOWER, NEW BRIGHTON.

SCHOOL BOARD OFFICES (HEADQUARTERS),
LIVERPOOL.

COBORN GIRLS' SCHOOL, BOW ROAD,
LONDON.

VARIOUS CHURCHES, &c., &c.

COPIES OF TESTIMONIALS.

1, VICTORIA STREET, WESTMINSTER, S.W.,
January 2nd, 1897.

Dear Sir,—The wrought iron casements which you have supplied to the Brook Fever Hospital, Shooter's Hill, and several other large public buildings of which I am the architect, are excellent in quality and very reasonable in price. They have given me great satisfaction.

Yours truly (signed), THOS. W. ALDWINCKLE.

6, ASSEY SQUARE, CHESTER, March 25th, 1898.

Dear Sir,—It is a matter of regret to me that I have not used your casements in a recent work, especially as those you supplied to Wardley Hall, Worsley, for the Bridgewater Trustees, were so satisfactory, not only in appearance but for being weather-tight. I hope in the course of the summer to give you an order.

I remain, yours faithfully,
(Signed), JOHN DOUGLAS (of DOUGLAS & MINSHULL.)

95, CANNON STREET, LONDON, E.C., April 2nd, 1898.
Mr. George Wragge has recently carried out some wrought iron railings and gates for me in a satisfactory manner. I am placing more work in his hands.

(Signed), GEORGE ELKINGTON.

32, KING ST. WEST, MANCHESTER, March 26th, 1898.

Dear Sir,—I have much pleasure in informing you that the metal casements which you have supplied for several years for various buildings carried out under my superintendence have been perfectly satisfactory to me, and have met with the entire approval of my clients. I may add that some of these have been fixed with every success in very exposed and trying positions. Yours truly (signed), JOHN ELY.

6, MILLSTONE LANE, LEICESTER, March 25th, 1898.

Dear Sir,—The wrought-iron casements you fixed at the Technical and Art Schools here are satisfactory to us.

Yours faithfully (signed), EVERARD & PICK.

26, HIGH STREET, CARDIFF, May 9th, 1897.
Dear Sir,—I am pleased to say that the whole of your work at the Bute Offices has been carried out and finished complete to my entire satisfaction.

Yours faithfully (signed), WILLIAM FRAME.

31, JAMES STREET, LIVERPOOL, March 28th, 1898.
We have pleasure in stating that Mr. George Wragge has supplied the metal casements for several houses for us, and that they have been most satisfactory.

(Signed), GRAYSON & OULD.

46, CASTLE STREET, SHREWSBURY, March 7th, 1898.
Dear Sir,—In answer to your of the 23rd Feb., re casements, church steeple, your casements are a perfect success and give every satisfaction, and shall certainly order from you when I have any more work requiring iron casements.

Yours faithfully (signed), S. GINGELL JONES.

7, DOUGHTY ST., MECKLENBURG SQ., W.C.,
March 28th, 1898.

Dear Sir,—I have great pleasure in saying that the ornamental wrought iron gateway and the wrought steel sashes which you have at various times executed for works under my superintendence, have always given me great satisfaction. The gateway at St. Peter's Church has been greatly admired.

Yours faithfully, (signed), JOHN LADDS.

SUN BUILDINGS, GLASGOW, May 28th, 1896.
The fittings are first-rate, and I am well pleased with them.

(Signed), WM. LEIPER.

EXCHANGE BUILDINGS, BRADFORD, Dec. 17th, 1895.
The casements are very satisfactory.

(Signed), MAWSON & HUDSON.

THE COURTS, CARLISLE, April 5th, 1898.
Dear Sir,—I have used your casements now for several years and I am glad to say that I have never yet had any cause for complaint. I have found them of good workmanship and appearance, and perfectly efficacious in turning the weather, in which respect they have been well tried in this district. I have specified them again recently in some restorations of old work.

Yours faithfully,
(Signed), GEO. DALE OLIVER.

10A, GEORGE STREET, EDINBURGH, April 19th, 1896.
Dear Sir,—... Allow me at the same time to express my entire satisfaction with the sashes. They are a very satisfactory job in wrought iron work.

(Signed), R. HAMILTON PATERSON.

CENTRAL BANK CHAMBERS, TORONTO ST., LEEDS,
January 2nd, 1897.

We have pleasure in stating that we consider the metal casements and wrought metal work executed by Mr. George Wragge to be of most excellent quality and workmanship.

(Signed), PERKIN & BULMER.

61, ROYAL AVENUE, BELFAST, February 1st, 1898.
We have found your second quality casements to be most satisfactory in several works we used them in lately.

(Signed), JAS. S. & J. PHILLIPS.

1, ST. MARNOCK PLACE, KILMARNOCK, Feb. 16th, 1897.
KILMARNOCK INFIRMARY.

Dear Sir,—I duly received yours of the 23rd December last, and an answer would have been sent sooner, but that it was thought best to see how the winter weather might affect the windows. I am glad to say that in all weathers the windows have given great satisfaction. (Signed), WM. RAILTON.

WESTMINSTER, S.W., March 31st, 1898.
The iron casements and other wrought iron work you have supplied, give us great satisfaction.

(Signed), ROLFE & MATTHEWS.

9, ADAM STREET, ADELPHI, LONDON, W.C.,
March 31st, 1898.

Dear Sir,—I have pleasure in saying that the work you have executed from my designs has been quite satisfactory. The porch at Notting Hill and the gates at Kensford are all that can be desired in wrought ironwork, the spirit of the style is well preserved in the scrolls and leaves, and the workmanship is very good indeed.

Yours faithfully (signed), F. W. ROPER.

OCTAGON CHAMBERS, MILBURN STREET, BATH.
We have used Mr. George Wragge's casements for some years and have always found them to be extremely effective in weather-proof qualities and of excellent workmanship throughout. The fittings of these casements, made in a number of pleasing designs, leave little to be desired in the way of finish and effectiveness. We are glad to recognize in all Mr. Wragge's decorative metal work, a high standard of quality and artistic craftsmanship; and designers may always rely upon him to faithfully maintain the distinctive character of their work.

(Signed), SILCOCK & REAY.

61, ALBION STREET, LEEDS, March 26th, 1898.

Dear Sir,—It gives me pleasure to state that you have provided me with ornamental metal work for buildings of which I have been the architect, and that the work has in all cases been executed to my satisfaction. At the Leeds School of Medicine you supplied the entrance gates and staircases and gallery balustrades, and more recently you have provided an ornamental iron balustrade for the warehouse of Messrs. Hotham & Whiting, Wellington Street, Leeds. The interior casement windows of the Operating Department of the Bristol Royal Infirmary which is being remodelled from my designs are being supplied by your firm. In all orders entrusted to your charge, I have found the work artistic in spirit and excellent in execution.

I am, yours faithfully,
(Signed), WILLIAM H. THORP, F.R.I.B.A.

19, QUEEN ANNE'S GATE, LONDON, S.W.,
January 14th, 1897.

Dear Sir,—I have on several occasions used your casements, and have found them very satisfactory.

(Signed), ASTON WEBB.

STAFFORD, December 2nd, 1897.
I hope this is not the last transaction we may have together. I am thoroughly satisfied with your casements.

Yours truly (signed), GEORGE WORMAL.

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NOTE. All sections are made in BRONZE, special estimates will be given.

All corners of our Casements are rivetted and brazed.
And all fittings are made on the premises.

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GEORGE WRAGGE,

WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES of No. 19 SECTION, registered (see opposite page), in steel, to open outwards. Guaranteed weather-tight. SPECIFICATIONS to which the price lists below are subject.

SIDE HUNG CASEMENTS.

Casements to have square heads, and prepared to receive glass in one square. All corners rivetted and brazed.

No. 1 QUALITY to be fitted with handle No. 86 (see page 37), and with sliding stay No. 94 (see page 47), those casements 4ft. 6in. and up to 5ft. in height to be fitted with sliding bolt securing the light at the top and bottom, and those over 5ft. in height with sliding bolt securing the light at the top, centre, and bottom, working on coinage metal plates. Casements to be hung on hard brass pivots working on lathe-turned steel or bronze centres. All fittings to be of coinage metal, polished and lacquered, toned or bronzed.

No. 2 QUALITY to be fitted with handle No. 84 (see page 37), stay No. 92 and 2 pins (see page 47), and with bolts to casements 4ft. 6in. in height and upwards, and hung on pivots as before described. All fittings to be of coinage metal, plainly filed.

No. 3 QUALITY to be fitted with handle and stay as in No. 2 Quality, and with bolts to casements 4ft. 6in. in height and upwards, and hung on pivots as before described. All fittings to be of malleable iron, with working parts in coinage metal.

NOTE: Any other fittings illustrated in this Catalogue can be adopted in preference to the above at *pro rata* prices if desired, or special designs and prices will be submitted.

TOP HUNG CASEMENTS.

No. 1 QUALITY to be fitted with No. 92 stay (see page 47) and 2 pins in coinage metal, polished or bronzed.
 No. 2 QUALITY do. do. do. in coinage metal, plainly filed.
 No. 3 QUALITY do. do. do. in malleable iron, with coinage metal parts.
 Special quotations will be given for rod or other gearing (see page 50).

Casements & Frames, side hung, opening outwards.					Fixed Lights.		
Height	Width	Quality 1	Quality 2	Quality 3	Size of iron for frame	Size of iron for sash	Angle iron
2ft. and under	2ft. & under	32/6	29/-	28/-	16/-	13/-	5/6
Above 2ft. & under 3ft.	" "	33/6	30/-	29/-	17/-	13/6	6/-
3ft. and under 3ft. 6in.	" "	35/-	31/6	30/6	18/-	14/-	6/6
3ft. 6in. and under 4ft.	" "	37/6	34/-	33/-	20/-	16/-	8/-
4ft. and under 4ft. 6in.	" "	38/6	35/-	34/-	21/-	17/-	9/-
4ft. 6in. and up to 5ft.	" "	55/-	50/-	47/6	23/-	18/-	10/-

NOTE: For Casements over 5ft. in height, see No. 1, see page 11, which is used.

Casements and Frames, top hung, to push out.					
Height	Width	Quality 1	Quality 2	Quality 3	Quality 4
2ft. and under	2ft. and under	25/-	24/5	23/6	23/6
Above 2ft. & under 2ft. 6in.	" "	25/6	24/6	24/-	24/-
2ft. 6in. and under 3ft.	" "	26/-	25/-	24/6	24/6
3ft. and up to 3ft. 6in.	" "	30/-	29/-	28/6	28/6

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS see page 34. For designs of FITTINGS, see pages 37 to 47.

The above section is made in BRONZE, prices on application.



GEORGE WRAGGE

Wardro metal works Salford Manchester 22 Surrey St Strand London W.C.

METAL CASEMENTS & FRAMES
in Steel iron & bronze

Guaranteed
weatherlight

Section No 19
in steel

to open @
outwards

Reg No @
231581

Full size @
details

Section
the head

Outside

Bridge post

Steel
Crate

Lead or packed
wood plug

Outside

glass

Plan of
Jamb

blowed for
condensation

Plan of
Jamb

Outside

Section
the sill

NOTE: The above sections are specially adapted for grooved joints etc, the outer frame being such so that in hot and cold fitted is the straight joint in ordinary flat sections avoided



GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES of No. 20 SECTION, registered (see opposite page), in steel, to open outwards. Guaranteed weather-tight.

The Specification for this section is the same as that given on page 8 both for the side hung and top hung casements.

Casements & Frames, side hung, opening outwards.					Fixed Lights.		
Height	Width	Qty 1	Qty 2	Qty 3	Qty 4	Qty 5	Angles Iron
2ft. and under	2ft. & under	38/6	35/-	34/-	20/-	15/-	5/6
Above 2ft. & under 3ft.	" "	39/0	36/-	35/-	21/-	15/6	6/-
3ft. & under 3ft. 6in.	" "	41/-	37/6	36/6	22/-	16/-	6/6
3ft. 6in. & under 4ft.	" "	43/6	40/-	39/-	24/-	18/-	8/-
4ft. & under 4ft. 6in.	" "	44/6	41/-	40/-	25/-	19/-	9/-
4ft. 6in. to 5ft.	" "	62/6	57/6	55/-	27/-	20/-	10/-
Above 5ft. & up to 6ft.	" "	72/6	67/6	65/-	30/-	22/6	12/-

NOTE: Casements of this section have been successfully made up to 10ft. in height.

Casements & Frames, top hung to push out				
Height	Width	Qty 1	Qty 2	Qty 3
2ft. and under	2ft. & under	31/-	30/-	29/6
Above 2ft. & under 2ft. 6in.	" "	31/6	30/6	30/-
2ft. 6in. and under 3ft.	" "	32/-	31/-	30/6
3ft. and up to 3ft. 6in.	" "	36/-	35/-	34/6

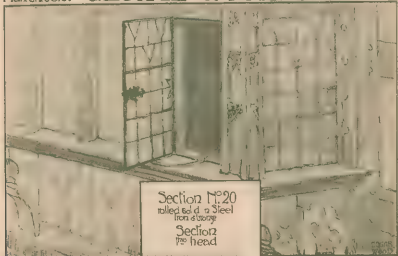
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The above section is made in BRONZE, prices on application.

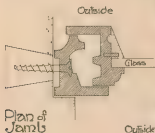
Wardry metal
works Salford
Manchester

GEORGE WRAGGE

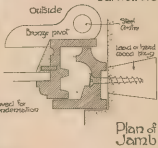
22 Surrey St
Strand
London W-C



Guaranteed
weatherlight



To open @
outwards



Full size
@ details



Reg N^o @
273662

NOTE: The above sections are specially adapted for grooved jambs etc., the
cill frame being SUNN, so that a bar can be fitted & the straight joint
as in ordinary flat sections avoided



GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES OF No. 21 SECTION, registered (see opposite page), in steel, to open inwards. Guaranteed weather-tight.

The Specification for this section is the same as that given on page 8 for the side hung casements, excepting that they are fitted with slide bolts 4ft. and upwards in height, and the stays are an adaptation of No. 94 (see page 47).

Casements & Frames, side hung, opening inwards.					Fixed Lights.		
Height.	Width.	Qty. 1	Qty. 2	Qty. 3	Angle Iron	Angle Iron	Angle Iron
2ft. and under	2ft. & under	43/6	40/-	39/-	20/	15/	5/6
Above 2ft. & under 3ft.	" "	44/6	41/-	40/-	21/	15/6	6/
3ft. & under 3ft. 6in.	" "	46/	42/6	41/6	22/-	16/-	6/6
3ft. 6in. & under 4ft.	" "	48/6	45/-	44/-	24/-	18/-	8/-
4ft. & under 4ft. 6in.	" "	67/6	62/6	60/-	25/-	19/-	9/-
4ft. 6in. to 5ft.	" "	70/-	65/-	62/6	27/-	20/-	10/-
Above 5ft. & up to 6ft.	" "	77/6	72/6	70/-	30/-	22/6	12/-


NOTE. Casements of this section have been successfully made up to 10ft. high.

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS see page 34. For designs of FITTINGS, see pages 37 to 47.

The above section is made in BRONZE, prices on application.



GEORGE WRAGGE

 Wardry metal
works Salford
Manchester

22 Surrey St
Strand
London W.C.

METAL CASEMENTS & FRAMES
in Steel iron & bronze

Guaranteed
weatherlight

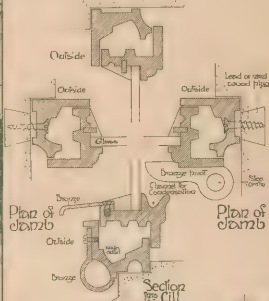
Section № 21
rolled solid in Steel

Full size @
@ details

Reg. Nos.
 @ 274249
 @ 275665
 @ 275662

Section
the head

To open
Inwards
or fall back
from cili @



NOTE: The above sections are specially adapted for grooved joints in the outer frame joints. Such a joint can be fitted to the straight joint on an ordinary section provided

GEORGE WRAGGE

WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES OF No. 22 SECTION, registered (see opposite page), in steel, to swing on centres. Guaranteed weather-tight.

Specification to which the price list below is subject.

All Casements prepared to receive glass in one square & with square heads, to be rivetted and brazed and hung on coinage metal rule jointed centres, with steel pin, and fitted with eyes at top and pulley and eye at bottom, to open and close by cords.

NOTE. Special quotations will be given for rod or other gearing (see page 50).

Casements & Frames, centre hung.				
Height		Width		Circulate
2ft. and under	-	2ft. and under	36/6	44/-
2ft. and under 2ft. 6in.	-	" "	37/6	45/-
2ft. 6in. and under 3ft.	-	" "	38/6	47/6
3ft. and up to 4ft.	-	" "	42/6	52/6

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS, see page 34. For designs of FITTINGS, see pages 37 to 47.

The above section is made in BRONZE, prices on application.



GEORGE WRAGGE

Wardry metal
works Salford
Manchester

22 Surrey St
Strand
London W.C.

METAL CASEMENTS & FRAMES
in Steel iron & bronze

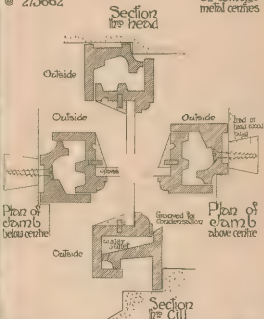
Guaranteed
weatheright

Section N° 22
in steel

Full size @
@ details

Reg N° @
@ 273662

To swing
on Corrug
metal centres



NOTE: The above sections are specially adapted for grooved
joints etc. the outer frame being such as not to be cut by
wind, & the sliding joint, as in ordinary flat sections, avoided



2000
1000

GEORGE WRAGGE

WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES OF No. 23 SECTION, registered (see opposite page), in steel, hung at cill, to fall inwards. Guaranteed weathertight.

Specification to which the price list below is subject.

All casements to have square heads to be prepared to receive glass in one square, all corners rivetted and brazed, and hung on hard brass pivots fitted with lathe-turned centres in steel or bronze.

No. 1 QUALITY, to be fitted with folding coinage metal side guides, pulleys and eyes for cords.

No. 2 QUALITY, to be fitted with malleable iron projecting side guides, pulleys and eyes for cords.

NOTE. Special quotations will be given for rod or other gearing (see page 50).

Casements and Frames hung at cill, to fall back.			
Height.	Width	Qty 1.	Qty 2.
2ft. and under - -	2ft. and under	37/6	33/-
Above 2ft. & under 2ft. 6in.	" "	40/-	35/6
2ft. 6in. and under 3ft. -	" "	41/6	37/-
3ft. and up to 3ft. 6in. -	" "	45/-	40/6

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS, see page 34. For designs of FITTINGS, see pages 37 to 47. The above section is made in BRONZE, prices on application.



GEORGE WRAGGE

Wardro metal works Salford Manchester 22 Sunry St Strand London W.C.

METAL CASEMENTS & FRAMES
in Steel iron & bronze

Guaranteed
weatherlight

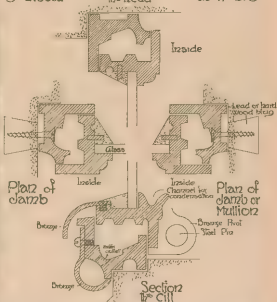
Section N°23
in Steel

Full size &
■ details

Reg. N°s
② 274249
② 273663
② 273662

To fall back
from cill &
hinge at side
as N° 21

Section
N° head



NOTE - The above sections are specially adapted for grooved jambs etc, the outer frame being such so that a bar can be fitted & the sash just as in ordinary flat sections avoided

GEORGE WRAGGE,

WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES of No. 24 SECTION, registered (see opposite page), in steel, to open outwards, hung double folding, WITHOUT CENTRE MEETING RAIL. Guaranteed weather tight

SPECIFICATION to which the price list below is subject.

Casements to have square heads, and prepared to receive glass in one square. All corners rivetted and brazed.

No. 1 QUALITY, to be fitted with 2 handles No. 86 (see page 37), 2 small bolts, one top and bottom, and 2 sliding stays No. 94 (see page 47); those casements 4ft. 6in. in height and upwards to be fitted with Espagnolette bolt securing the two frames at the top, centre and bottom in one movement. Casements to be hung on hard brass pivots working on lathe-turned steel or bronze centres. All fittings to be of coinage metal, polished and lacquered, toned or bronzed

No. 2 QUALITY, to be fitted with 2 handles No. 84 (see page 37), 2 small bolts, one top and bottom, and 2 stays No. 92 with 2 pins (see page 47); those casements 4ft. 6in. in height and upwards to be fitted with Espagnolette bolt as before described, and hung on pivots as above. All fittings to be of coinage metal, plainly filed.

No. 3 QUALITY, to be fitted with handles and stays as in No. 2 quality and with our ordinary pattern sliding bolt to casements 4ft. 6in. and upwards in height. All fittings to be of malleable iron with working parts in coinage metal.

NOTE. Any other fittings illustrated in this Catalogue can be adopted in preference to the above at *pro rata* prices if desired, or special designs and prices will be submitted.

When casements are required as doors, stays are not used, and their value (see page 46) is deducted from this price list.

Casements and Frames to open outwards, hung double folding (without centre meeting rail).					Fixed Lights.		
Height	Width Over the two Casements	Quality 1	Quality 2	Quality 3	Same frame as the window	Overhead of the frame by the use of any glass of price as the window	Angle Iron
2ft. and under	4ft. & under	72/6	62/6	59/6	32/6	20/-	10/-
Above 2ft. & under 3ft. 6in.	" "	80/-	70/-	67/-	37/6	23/6	11/-
" 3ft. 6in. & under 4ft. 6in.	" "	87/6	77/6	74/6	40/6	25/-	12/6
4ft. 6in. and up to 6ft.	" "	125/-	115/-	100/-	50/-	31/6	17/6
Above 6ft. & under 6ft. 6in.	" "	150/-	140/-	125/-	62/6	38/6	20/-
6ft. 6in. and under 7ft.	" "	160/-	150/-	135/-	67/6	41/-	22/-
7ft. and under 8ft.	" "	170/-	160/-	145/-	72/6	45/-	24/6
8ft. and under 9ft.	" "	180/-	170/-	155/-	77/6	47/6	27/-
9ft. and up to 10ft.	" "	190/-	180/-	165/-	82/6	50/-	29/-

NOTE. For casements opening INWARDS in pairs, and without centre meeting rail (section No 21A), add 10/- to the above price list. The prices of the fixed lights will remain as above.

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that a comparison can at once be made. For complete list of EXTRAS see page 34. For designs of FITTINGS, see pages 37 to 47.

The above section is made in BRONZE, prices on application.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C.



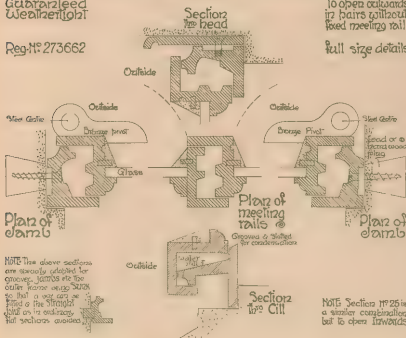
Section N° 24
in Steel

Guaranteed
Weatherlight

Reg. N° 273662

To open outwards
in pairs without
fixed meeting rail

full size details



GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES of No. 4 SECTION (see opposite page) in wrought iron, to open outwards. Weather tight under ordinary conditions SPECIFICATION to which the price list below is subject.

SIDE HUNG CASEMENTS.

CaseMENTS to have square heads, and prepared to receive glass in one square. All corners rivetted and brazed.

No. 2 QUALITY, to be fitted with handle No. 84 (see page 37), and stay with two pins, No. 92 (see page 47), of coinage metal, plainly filed.

No. 3 QUALITY, to be fitted with similar fittings, but in malleable iron, having coinage metal working parts.

TOP HUNG CASEMENTS.

No. 2 QUALITY, to be fitted with No. 92 stay and 2 pins (see page 47), in coinage metal, plainly filed.

No. 3 QUALITY, to be fitted with No. 92 stay and 2 pins (see page 47), in malleable iron, with coinage metal parts.

CaseMENTS - Frames, side hung, opening outwards.				Fixed Lights.		
Height	Width	Quality 1	Quality 2	Quality 1	Quality 2	Angle Iron
2ft. and under	2ft. & under	24/-	28/-	15/6	12/6	5/6
Above 2ft. & under 3ft.	" "	31/-	39/-	16/6	13/-	6/-
3ft. and under 3ft. 6in.	" "	31/-	39/-	17/6	13/6	6/6
3ft. 6in. and under 4ft.	" "	32/6	41/6	19/6	15/6	8/-
4ft. and under 4ft. 6in.	" "	32/6	41/6	20/6	16/6	8/6
4ft. 6in. and up to 5ft.	" "	33/6	42/-	22/6	17/6	9/-

NOTE: This section is not recommended for CaseMENTS over 5ft. high.

CaseMENTS & Frames, top hung, to push out.			
Height	Width	Quality 1	Quality 2
2ft. and under	2ft. and under	25/6	25/-
Above 2ft. and under 2ft. 6in.	" "	26/-	25/6
2ft. 6in. and under 3ft.	" "	27/-	26/6
3ft. and up to 3ft. 6in.	" "	28/6	28/-

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS, see page 34. For designs of FITTINGS, see pages 37 to 47.

The above section is made in BRONZE, prices on application.



GEORGE WRAGGE

Ward's metal
works Salford
Manchester

22 Surrey St
Strand
London W.C.

METAL CASEMENTS & FRAMES
in Steel iron & bronze

Weatherlight
under
ordinary
conditions

Section No 4
1/2 Iron

To open &
outwards

Full Size
of details

Section
the head



Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Outside

Plan of
Jamb

Plan of
Jamb

Elevation



Outside

Outside

Section
the sill

Note: This covered
case be prepared
to seal city details

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES of No. 5 SECTION (see opposite page) in wrought iron, to open outwards. Weather-tight under ordinary conditions SPECIFICATIONS to which the price lists below are subject.

SIDE HUNG CASEMENTS.

Casements to have square heads, and prepared to receive glass in one square. All corners rivetted and brazed.

No. 2 QUALITY, to be fitted with handle No. 84 (see page 37), and stay with two pins, No. 92 (see page 47), of coinage metal, plainly filed.

No. 3 QUALITY, to be fitted with similar fittings, but in malleable iron, having coinage metal working parts.

NOTE. Any other fittings illustrated in this Catalogue can be adopted in preference to the above at *pro rata* prices if desired, or special designs and prices will be submitted.

Casements & Frames, side hung, opening outwards.				Fixed Lights.		
Height.	Width.	2 ft. and under	2 ft. 6 in. and under	2 ft. 6 in. and under	2 ft. 6 in. and under	Angle (in)
2 ft. and under	2 ft. and under	26/-	25/-	13/-	11/6	5/6
Above 2 ft. & under 3 ft.	" "	27/-	26/-	14/-	12/	6/
3 ft. and under 3 ft. 6 in.	" "	28/-	27/-	15/-	12/6	6/6
3 ft. 6 in. and under 4 ft.	" "	30/-	29/-	17/-	14/6	8/
4 ft. and under 4 ft. 6 in.	" "	31/6	30/6	18/-	15/6	9/

NOTE. This section is not recommended for Casements over, say, 4 ft. 3 in. in height.

TOP HUNG CASEMENTS.

No. 2 QUALITY, to be fitted with No. 92 stay and 2 pins (see page 47), in coinage metal, plainly filed.

No. 3 QUALITY, to be fitted with No. 92 stay and 2 pins (see page 47), in malleable iron, with coinage metal parts.

NOTE. Special quotations will be given for rod or other gearing (see page 50)

Casements & Frames, top hung, to push out.			
Height.	Width.	Quality 2.	Quality 3.
2 ft. and under	2 ft. and under	23/6	23/-
Above 2 ft. and under 2 ft. 6 in.	" "	24/-	23/6
2 ft. 6 in. and under 3 ft.	" "	25/-	24/6
3 ft. and up to 3 ft. 6 in.	" "	26/6	26/-

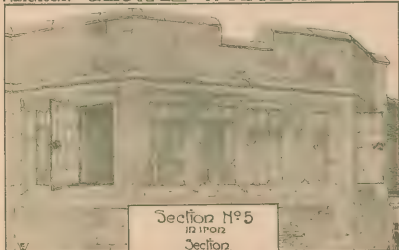
The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS see page 34. For designs of FITTINGS, see pages 37 to 47.

The above section is made in BRONZE, prices on application.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C



Section N°5

1/2 1" or 1/2

Section
thro head

Weather light
under ordinary
conditions

Full Size
details
to open &
outwards



Elevation

Plan of
Jamb

Plan of
Jamb



Section
thro. Sill

NOTE: This Casement
can be prepared
to suit any details

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES of No. 8 SECTION (see opposite page), in wrought iron, to open inwards. Weather tight under ordinary conditions. SPECIFICATION to which the price list below is subject.

Casements to have square heads, and prepared to receive glass in one square. All corners rivetted and brazed.

No. 2 QUALITY, to be fitted with handle No. 84 (see page 37), and hook stay with 2 eyes No. 93 (see page 47), of coinage metal, plainly filed.

No. 3 QUALITY, to be fitted with similar fittings, but in malleable iron, having coinage metal working parts.

NOTE. Any other fittings illustrated in this Catalogue can be adopted in preference to the above at *pro rata* prices if desired, or special designs and prices will be submitted.

Casements & Frames, side hung, opening inwards.				Fixed Lights.		
Height	Width	Quality	Quantity	the sash weight	the weight of glass in the Casement	Angle Iron
2ft. and under	2ft. & under	27/6	26/6	13/	11/6	5/6
Above 2ft. & under 3ft.	" "	28/6	27/6	14/	12/	6/-
3ft. and under 3ft. 6in.	" "	29/6	28/6	15/	12/6	6/6
3ft. 6in. and under 4ft.	" "	31/6	30/6	17/	14/6	8/-
4ft. and under 4ft. 6in.	" "	33/-	32/-	18/	15/6	9/-

NOTE. This section is not recommended for Casements over, say, 4ft. 3in. in height. The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS see page 34. For designs of FITTINGS, see pages 37 to 47.

The above section is made in BRONZE, prices on application.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C.

Section №8
in Iron

Weatherlight
under @
ordinary
conditions

Full size @
@ details
to open @
inwards

Section
the head

Outside

Cellulose

Gloss

Plan of
Jamal

Elevation

Outside

Lead or hard
wood plug.

Ernst Fuchs

Steel Centre

Plan of
clams

Outside

Bryce, R.

Section
thru Cill

NOTE: This Cement can be prepared to suit any details.

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS & FRAMES of Nos. 9 & 10 SECTIONS (see opposite page) in wrought iron, hung at cill, to fall inwards. No. 9 Section is guaranteed weather-tight, and No. 10 is weather-tight under ordinary conditions.

Specification to which the price lists below are subject.

Casements to have square heads, and prepared to receive glass in one square. All corners rivetted and brazed.

No. 1 QUALITY, to be fitted with folding coinage metal side guides, pulleys and eyes for cords.

No. 2 QUALITY, to be fitted with malleable iron projecting side guides, pulleys and eyes for cords.

NOTE. Special quotations will be given for rod or other gearing (see page 50)

SECTION No 9.			
Casements and Frames hung at cill, to fall inwards.			
Height.	Width	Quality 1.	Quality 2.
2ft. and under - - -	2ft. and under	25/-	22/6
Above 2ft. and under 3ft. -	" "	26/-	23/6
3ft. and up to 3ft. 6in. -	" "	28/6	26/-
Above 3ft. 6in. and up to 4ft. -	" "	32/-	29/6

SECTION No 10.			
Casements and Frames hung at cill, to fall inwards.			
Height	Width	Quality 1.	Quality 2.
2ft. and under - - -	2ft. and under	23/-	20/6
Above 2ft. and under 3ft. -	" "	24/-	21/6
3ft. and up to 3ft. 6in. -	" "	26/6	24/-
Above 3ft. 6in. and up to 4ft. -	" "	30/-	27/6

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS, see page 34. For designs of FITTINGS, see pages 37 to 47.

The above sections are made in BRONZE, prices on application.

GEORGE

Wardry metal
works Salford
Manchester



WRAGGE

22 Surrey St
Strand
London W-C

Section No 9
for transoms
lights only

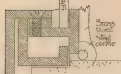
To pivot at Cill
and fall back

Full size

Section
the Head



Inside
Elevation



Section
the Cill

each
wood

Note: Some details of
rebate of sides as
shown at head

Note: These sections
can be prepared to
suit any details

Section No 10
for transoms
lights only

To pivot at Cill
and fall back

Full Size :

Section
the Head



Section
the Cill

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS AND FRAMES of Nos. 11, 12, and 12a SECTIONS (see opposite page), in wrought iron, to swing on centres. No. 12 section is guaranteed weather-tight. Nos. 11 and 12a are weather-tight under ordinary conditions.

SPECIFICATION to which the price lists below are subject.

Casements prepared to receive glass in one square, and with square heads. All corners to be rivetted and brazed, hang on coinage metal turned centres, and fitted with eyes at top, and pulleys and eyes at bottom, to open and close by cords.

NOTE. Special quotations will be given for rod or other gearing (see page 50).

Section No. 12a.			Section No. 11		Section No. 12.		
Casements & Frames to swing on centres.			Frames to swing on centres.		Casements & Frames to swing on centres.		
Height.	Width.		Height as in Section 12a.	Width as in Section 12a.	Height.	Width.	
2ft. and under	2ft. & under	17	Same heights as in Section 12a.	20	2ft. and under	2ft. & under	23/-
2ft. 6" under 2ft. 6"	" "	16		22	2ft. 6" under 2ft. 6"	" "	24
* 2ft. 6" & under 3ft.	" "	15/6		23/6	2ft. 6" & under 3ft.	" "	25/6
* 3ft. and up to 4ft.	" "	15		25/-			
Circular Casements.			Circular Casements.			Circular Casements.	
Diameter Section No. 12a.			Diameter Section No. 11.			Diameter Section No. 12.	
2ft. and under	-	19/-	2ft. and under	-	25/-	2ft. and under	- 28/-
Abv. 2ft. & under 2ft. 6"	-	20/-	Abv. 2ft. & under 2ft. 6"	-	26/-	Abv. 2ft. & under 2ft. 6"	- 28/6
2ft. 6" and under 3ft.	-	22/6	2ft. 6" and under 3ft.	-	30/-	2ft. 6" and under 3ft.	- 31/6

*Heavier Section.

The prices of each section illustrated in this Catalogue are grouped together on pages 32 & 33, so that easy comparison can at once be made. For complete list of EXTRAS, see page 34. For designs of FITTINGS, see pages 17 to 47.

The above sections are made in BRONZE, prices on application.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

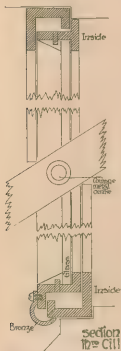
22 Surrey St
Strand
London W.C

Section No 12

to pivot
on centres

Full size
details :

Section
the head



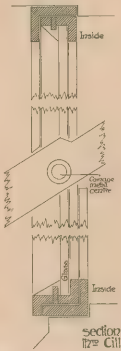
NOTE: The same detail of edge is required
of the sides as shown of head and cill

Section No 11

to pivot
on centres

Full size
details

Section
the head

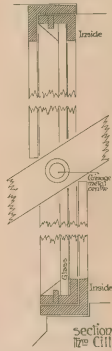


Section No 12^a

to pivot
on centres

Full size
details

Section
the head



These components can be
made to suit any details

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

CASEMENTS of Nos. 26, 27, 28, 29, 30 & 31 SECTIONS (see opposite page). Sections 26 & 27 in steel, the remainder in wrought iron. Sections 26, 28 & 29 (with loose slips) if properly fixed are weather tight under ordinary conditions, and make very satisfactory casements.

SPECIFICATION to which the price list below is subject

Casements to have square heads & prepared to receive glass in one square. All corner rivetted and brazed.

No. 1 QUALITY, to be fitted with solid brass butt hinges, handle No. 44 see page 37, and stay with two pins No. 42 see page 47, in cast-iron metal, plain & lined.

No. 3 QUALITY, to be fitted with iron butt hinges, handle, and stay with two pins, of good design, in malleable iron.

NOTE. Any other fittings illustrated in this Catalogue can be adopted in preference to the above at *pro rata* prices if desired, or special designs and prices will be submitted.

SECOND QUALITY.

Height.	Width	SECTIONS					
		26	27	28	29	30	31
2ft. and under	2ft. & under	17/-	17/-	18/6	18/-	15/6	14/-
Abv. 2ft. and under 3ft.	" "	21/-	18/-	19/6	19/-	16/6	16/-
3ft. and under 3ft. 6in.	" "	22/-	18/-	20/6	20/-	17/6	17/-
3ft. 6in. and under 4ft.	" "	23/-	20/-	21/6	21/-	18/6	18/-
4ft. and up to 4ft. 6in.	" "	24/-	21/6	22/6	22/-	19/6	19/-

THIRD QUALITY.

Height.	Width	SECTIONS					
		26	27	28	29	30	31
2ft. and under	2ft. & under	17/-	14/-	15/6	15/-	12/6	12/-
Abv. 2ft. and under 3ft.	" "	18/-	15/-	16/6	16/-	13/6	13/-
3ft. and under 3ft. 6in.	" "	19/-	16/-	17/6	17/-	14/6	14/-
3ft. 6in. and under 4ft.	" "	20/-	17/-	18/6	18/-	15/6	15/-
4ft. and up to 4ft. 6in.	" "	21/-	18/-	19/6	19/-	16/6	16/-

NOTE. For prices of hopper and sliding casements, etc., etc., see page 48.

The prices of each section illustrated in this Catalogue are as follows: 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

The above sections are made in BRONZE, prices on application.

Wardry metal
works Salford
Manchester

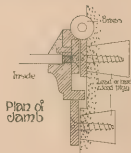
GEORGE WRAGGE

22 Surrey St
Strand
London W-C

Section N°26

Full size
details
to hinge
at side
to open
outwards

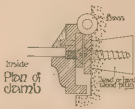
Same details of
head & tail
as in Section N°25



Section N°27

Full size
details
to hinge
at side
to open
outwards

Same details of
head & tail
as in Section N°25



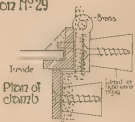
Section N°28

Full size
details
to hinge
at side
to open
outwards

Same details of
head & tail
as in Section N°25



Section N°29

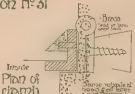


Section N°30

Full size
details
to hinge
at side
to open
outwards



Section N°31



GEORGE WRAGGE,

WARDRYMETALWORKS, Salford, MANCHESTER.

The tables below give the prices of the whole of the casements illustrated in this Catalogue, so that a comparison can easily be arrived at, & opposite each illustration a complete specification of the fittings, etc., is given.

SIDE HUNG CASEMENTS. FIRST QUALITY.

HEIGHT.	WIDTH.	N ^o 1.	N ^o 2.	N ^o 3.	N ^o 4.	N ^o 5.	N ^o 6.
2ft. and under	2ft. and under	1. 0	1. 0	1. 0	1. 0	1. 0	1. 0
Above 2ft. and under 3ft.	"	1. 1	1. 1	1. 1	1. 1	1. 1	1. 1
3ft. and under 3ft. 6in.	"	1. 2	1. 2	1. 2	1. 2	1. 2	1. 2
3ft. 6in. and under 4ft.	"	1. 3	1. 3	1. 3	1. 3	1. 3	1. 3
4ft. and under 4ft. 6in.	"	1. 4	1. 4	1. 4	1. 4	1. 4	1. 4
4ft. 6in. to 5ft.	"	1. 5	1. 5	1. 5	1. 5	1. 5	1. 5
Above 5ft. and up to 6ft.	"	1. 6	1. 6	1. 6	1. 6	1. 6	1. 6
HEIGHT.	WIDTH.	N ^o 7.	N ^o 8.	N ^o 9.	N ^o 10.	N ^o 11.	N ^o 12.
2ft. and under	2ft. and under	1. 0	1. 0	1. 0	1. 0	1. 0	1. 0
Above 2ft. and under 3ft.	"	1. 1	1. 1	1. 1	1. 1	1. 1	1. 1
3ft. and under 3ft. 6in.	"	1. 2	1. 2	1. 2	1. 2	1. 2	1. 2
3ft. 6in. and under 4ft.	"	1. 3	1. 3	1. 3	1. 3	1. 3	1. 3
4ft. and under 4ft. 6in.	"	1. 4	1. 4	1. 4	1. 4	1. 4	1. 4
4ft. 6in. to 5ft.	"	1. 5	1. 5	1. 5	1. 5	1. 5	1. 5
Above 5ft. and up to 6ft.	"	1. 6	1. 6	1. 6	1. 6	1. 6	1. 6

SECOND QUALITY.

HEIGHT.	WIDTH.	N ^o 1.	N ^o 2.	N ^o 3.	N ^o 4.	N ^o 5.	N ^o 6.
2ft. and under	2ft. and under	2. 0	3. 0	4. 0	5. 0	6. 0	7. 0
Above 2ft. and under 3ft.	"	2. 1	3. 1	4. 1	5. 1	6. 1	7. 1
3ft. and under 3ft. 6in.	"	2. 2	3. 2	4. 2	5. 2	6. 2	7. 2
3ft. 6in. and under 4ft.	"	2. 3	3. 3	4. 3	5. 3	6. 3	7. 3
4ft. and under 4ft. 6in.	"	2. 4	3. 4	4. 4	5. 4	6. 4	7. 4
4ft. 6in. to 5ft.	"	2. 5	3. 5	4. 5	5. 5	6. 5	7. 5
Above 5ft. and up to 6ft.	"	2. 6	3. 6	4. 6	5. 6	6. 6	7. 6
HEIGHT.	WIDTH.	N ^o 7.	N ^o 8.	N ^o 9.	N ^o 10.	N ^o 11.	N ^o 12.
2ft. and under	2ft. and under	2. 0	3. 0	4. 0	5. 0	6. 0	7. 0
Above 2ft. and under 3ft.	"	2. 1	3. 1	4. 1	5. 1	6. 1	7. 1
3ft. and under 3ft. 6in.	"	2. 2	3. 2	4. 2	5. 2	6. 2	7. 2
3ft. 6in. and under 4ft.	"	2. 3	3. 3	4. 3	5. 3	6. 3	7. 3
4ft. and under 4ft. 6in.	"	2. 4	3. 4	4. 4	5. 4	6. 4	7. 4
4ft. 6in. to 5ft.	"	2. 5	3. 5	4. 5	5. 5	6. 5	7. 5
Above 5ft. and up to 6ft.	"	2. 6	3. 6	4. 6	5. 6	6. 6	7. 6

THIRD QUALITY.

HEIGHT.	WIDTH.	N ^o 1.	N ^o 2.	N ^o 3.	N ^o 4.	N ^o 5.	N ^o 6.
2ft. and under	2ft. and under	2. 0	3. 0	4. 0	5. 0	6. 0	7. 0
Above 2ft. and under 3ft.	"	2. 1	3. 1	4. 1	5. 1	6. 1	7. 1
3ft. and under 3ft. 6in.	"	2. 2	3. 2	4. 2	5. 2	6. 2	7. 2
3ft. 6in. and under 4ft.	"	2. 3	3. 3	4. 3	5. 3	6. 3	7. 3
4ft. and under 4ft. 6in.	"	2. 4	3. 4	4. 4	5. 4	6. 4	7. 4
4ft. 6in. to 5ft.	"	2. 5	3. 5	4. 5	5. 5	6. 5	7. 5
Above 5ft. and up to 6ft.	"	2. 6	3. 6	4. 6	5. 6	6. 6	7. 6
HEIGHT.	WIDTH.	N ^o 7.	N ^o 8.	N ^o 9.	N ^o 10.	N ^o 11.	N ^o 12.
2ft. and under	2ft. and under	2. 0	3. 0	4. 0	5. 0	6. 0	7. 0
Above 2ft. and under 3ft.	"	2. 1	3. 1	4. 1	5. 1	6. 1	7. 1
3ft. and under 3ft. 6in.	"	2. 2	3. 2	4. 2	5. 2	6. 2	7. 2
3ft. 6in. and under 4ft.	"	2. 3	3. 3	4. 3	5. 3	6. 3	7. 3
4ft. and under 4ft. 6in.	"	2. 4	3. 4	4. 4	5. 4	6. 4	7. 4
4ft. 6in. to 5ft.	"	2. 5	3. 5	4. 5	5. 5	6. 5	7. 5
Above 5ft. and up to 6ft.	"	2. 6	3. 6	4. 6	5. 6	6. 6	7. 6

For complete list of extras, see page 34. For designs of fittings, see pages 37 to 47. For prices of hopper, sliding casements, etc. see page 48.

GEORGE WRAGGE,

WARDRY METAL WORKS, SALFORD, MANCHESTER.

TOP HUNG CASEMENTS, to push out. FIRST QUALITY.

HEIGHT.	WIDTH.	No. 29.	No. 30.	No. 4.	No. 5.
2ft. and under - - -	2ft. and under	25/-	31/-	Not priced in this quality.	Not priced in this quality.
Above 2ft. and under 2ft. 6in. - -	" "	25/6	31/6		
2ft. 6in. and under 3ft. - -	" "	26/-	32/-		
3ft. and up to 3ft. 6in. - -	" "	30 -	36		

SECOND QUALITY.

HEIGHT.	WIDTH.	No. 12.	No. 13.	No. 4.	No. 5.
2ft. and under - - -	2ft. and under	22 -	30 -	25/6	21/6
Above 2ft. and under 2ft. 6in. - -	" "	22/6	30/6	26	22
2ft. 6in. and under 3ft. - -	" "	25	31 -	27	25
3ft. and up to 3ft. 6in. - -	" "	29	35 -	28/6	26/6

THIRD QUALITY.

HEIGHT.	WIDTH.	No. 10.	No. 11.	No. 4.	No. 5.
2ft. and under - - -	2ft. and under	21/6	29/6	25 -	21
Above 2ft. and under 2ft. 6in. - -	" "	24	30 -	25/6	21/6
2ft. 6in. and under 3ft. - -	" "	24/6	30/6	26/6	22/6
3ft. and up to 3ft. 6in. - -	" "	28/6	34/6	28 -	26

BOTTOM HUNG CASEMENTS, to fall back. FIRST QUALITY.

HEIGHT.	WIDTH.	No. 23.	No. 9.	No. 10.
2ft. and under - - -	2ft. and under	17/6	25	21 -
Above 2ft. and under 3ft. - -	" "	48/6	26 -	24 -
3ft. and up to 3ft. 6in. - -	" "	45	28/6	26/6
Above 3ft. 6in. and up to 4ft. - -	" "	48/6	32 -	30

SECOND QUALITY.

HEIGHT.	WIDTH.	No. 23.	No. 9.	No. 10.
2ft. and under - - -	2ft. and under	13	22/6	20/6
Above 2ft. and under 3ft. - -	" "	17	23/6	21/6
3ft. and up to 3ft. 6in. - -	" "	40/6	26 -	24
Above 3ft. 6in. and up to 4ft. - -	" "	44 -	29/6	27/6

CENTRE HUNG CASEMENTS.

HEIGHT.	WIDTH.	No. 12.	No. 11.	No. 12.	No. 12a.
2ft. and under - - -	2ft. and under	36/6	20 -	23 -	15
2ft. and under 2ft. 6in. - -	" "	37/6	21 -	24 -	16 -
2ft. 6in. and under 3ft. - -	" "	38/6	23/6	25/6	17/6
3ft. and up to 4ft. - -	" "	42/6	25 -		19/6

For complete list of extras, see page 34. For designs of fittings, see pages 37 to 47. For prices of hopper, sliding casements, etc., see page 48.

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

EXTRAS.

SHAPED HEADS AND CURVED ON PLAN.

Casements & Frames, and Fixed Lights of two frames.			Fixed Lights of one frame.			
			Giving same pane of glass and sight line as casement		Angle Iron.	
Size.	Single or Curved on Plan.	Price.	Size.	Price.	Size.	Price.
10, 20, 21, 22, 23	10/-	15/-	5	8	3	0/-
24 double	20/-	30/-	10	10	5	8/-
4	8, 6	13 0	15	10	1	0/-
5, 8, 9, 10, 11, 12, 12a	6 6	1	20	6/-	3/-	0
26, 28, 29	4/-	6/-			3/-	10/-
27, 30, 31	3/6	5 6			1	6

Glazing in panes, 9d. per pane. Glazing Bars (single) 1/- each.

Saddle Bars (for leaded glazing), Iron 6d. each, Bronze, 1/- each.

Fillets for grooved details, 3d. per lin. foot.

Plain Lead Cills, prepared for fixing under casements, 1/6 per lin. foot.

Ditto, with condensation gutter for fixed glazing (where metal frames are not used), 1/9 per lin. foot.

Colliage Metal Spring Catches, with hook to work by long pin, 2/- each.

Ditto, with pulley to work by cords, 2/6 each.

Special quotation will be given for various forms of glazing, see pages 5 & 6.

For designs of fittings see pages 37 to 47.

CASEMENT FITTINGS.

These fittings can be made to suit any details for Wood Casements; comparison in design, quality of finish, and price, is invited.

All fittings, of whatever material, are made at my own works, which greatly facilitates the carrying out of special designs (which designs will be reserved when desired).

All parts of our fittings are made to gauge, and are so fitted to our metal casements that broken parts can be replaced without unglazing, and without the assistance of skilled labor.

Our coinage or bronze metal is of a special mixture, and with age takes a beautiful tone, but this can be at once attained by a process, which treatment is permanent and is covered by the prices given for best finished work.

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

Handles and Plates (see opposite page) prepared for Metal Casements; they can be adapted to suit any detail of Wood Casements at prices as below.

No. 1, malleable iron, bronzed or dull blacked, fitted up with coinage metal working parts.

No. 2, hammered iron, finished dull bright.

No. 3, coinage metal, plainly filed.

No. 4, coinage metal, polished and toned, or bronzed.

CASEMENT HANDLES & PLATES.				
Nos.	Malleable Iron, bronzed or painted.	Hammered Iron.	Coinage Metal, plainly filed.	Coinage Metal, polished, toned, or bronzed.
83	2/6	7/6	4/-	5/-
84	1/6	5/-	2/9	3/3
85	2/-	8/6	4/-	5/-
86	2/6	7/6	4/6	5/6
87	2/-	5/6	4/-	5/-
88	1/6	5/6	2/9	3/3
89	1/6	5/-	2/9	3/3

Cheaper Iron Handles than those priced above can be used of ordinary stock patterns, but they are lighter and have all working parts in iron; they are not recommended.

The above fittings can be made in silver, aluminum, brass, &c., &c.

In ordering, the "hands" should be stated, and details of the woodwork given full size, both casement and frame.

Nos. 83 and 84 illustrate a right and left hand respectively.

Special designs will be submitted or quoted for, or architects' own designs will be carried out and reserved if desired.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C

HANDLES FOR DO
METAL OR WOOD
CASEMENTS TO
SWITCH DETAILS

THEY CAN BE MADE IN
A VARIETY OF METALS

ABOUT FULL SIZE



No. 83



No. 85



No. 84



No. 86



No. 87



No. 88



No. 89

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

Handles and Plates (see opposite page) prepared for either wood or metal casements, at prices as below.

IN HAMMERED IRON ONLY.

No. 75	25/- each	No. 79	9/6 each
" 76	25/- "	" 80	25/- "
" 77	20/- "	" 81	20/- "
" 78	20/- "	" 82	20/- "

NOTE. These handles will be finished with an "old armour" or dull bright surface, or left dull as from the anvil if desired; they can be forged in copper or other metals, for which prices will be given.

In ordering, the "hands" should be stated, and details of the woodwork given full size.

Nos. 75 and 76 illustrate a right and left hand respectively.

Special designs will be submitted or quoted for, or architects' own designs will be carried out and reserved if desired.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C

Wrot Metal Handles
for Wood or Iron
Casements © ©



75



76



77



78



79

About Half
Full size ©



80



81



82

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

Handles and Plates (see opposite page) prepared for metal or wood casements, at prices as below.

IN HAMMERED IRON ONLY.

No. 65	21/- each	No. 70	8/6 each
" 66	22/6 "	" 71	20/- "
" 67	11/6 "	" 72	22/6 "
" 68	15/- "	" 73	20/- "
" 69	13/- "	" 74	20/- "

NOTE. The examples as illustrated are careful reproductions of old work, and the "feeling" will be thoroughly maintained; they will be finished with an "old armour" or dull bright surface, or left dull as from the anvil if desired; they can be made in hammered copper, bronze, brass, or other metal, and "toned," for which prices will be given. In ordering, the "hands" should be stated, and details of the woodwork given full size.

Nos. 65 and 66 illustrate a right and left hand respectively.

Special designs will be submitted or quoted for, or architects' own designs will be carried out or reserved if desired.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W-C

65

Back Plates for Metal
Casements: Old Samples
in Hammered Iron:

66



68

67

69

half
full size



71

70

72



Can be
reproduced
in any metal



over
back

73

74

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

Handle Plates for Metal or Wood Casements (see opposite page.)

These Handle Plates can be fitted to any Casements. They can be made in other metals than those priced below at proportionate rates.

No. 1, malleable iron, bronzed or dull blacked, fitted up with coinage metal working parts.

No. 2, hammered iron, finished dull bright.

No. 3, coinage metal, plainly filed.

No. 4, coinage metal, polished and toned, or bronzed.

HANDLE PLATES.				
No.	1	2	3	4
50	1/6	7/6	4/	4/6
51	1/6	7/-	3/6	4/-
52	1/9	12/6	5/6	6/-
53	1/9	10/6	5/	5/6
54	1/9	10/6	5/	5/6
55	1/9	10/6	5/	5/6
56	2/6	15/	9/	10/

For Saddle Bars see page 34.

Special designs will be submitted or quoted for, or architects' own designs will be carried out or reserved if desired.

Wardry metal
works Salford
Manchester

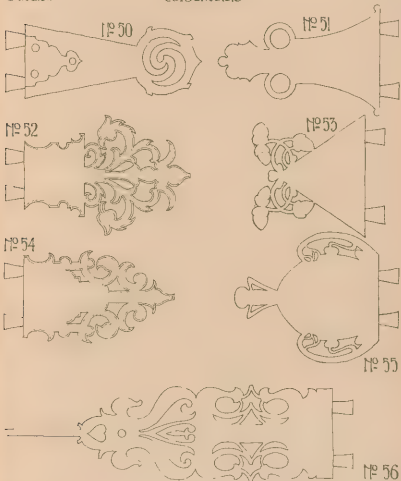
GEORGE WRAGGE

22 Surrey St
Strand
London W.C

Made in
any
metal

Back Plates
for metal
casements

Half full
size



Edgar
Wood

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

Handle Plates for Metal or Wood Casements (see opposite page.)

These Handle Plates can be fitted to any Casements. They can be made in other metals than those priced below at proportionate rates.

No. 1, malleable iron, bronzed or dull blacked, fitted up with coinage metal working parts.

No. 2, hammered iron, finished dull bright.

No. 3, coinage metal, plainly filed.

No. 4, coinage metal, polished and toned, or bronzed.

HANDLE PLATES.				
Nos	1	2	3	4
57	1/9	9/6	4/6	5/-
58	1/6	7/-	3/6	4/-
59	1/9	10/6	5/-	5/6
60	1/9	10/6	5/-	5/6
61	1/3	9/6	5/-	5/6
62	1/9	9/6	5/-	5/6
63	2/-	11/6	6/-	6/6
64	1/9	9/6	5/6	6/-

For Saddle Bars see page 34.

Special designs will be submitted or quoted for, or architects' own designs will be carried out and reserved if desired.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W-C

Back Plates
for metal
cosmetics

Nº 57

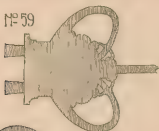


Nº 58



Half full
size

Nº 59



Nº 60



Nº 61



Nº 62



Made in
any
metal

Nº 63



Nº 64



Polish
wood

GEORGE WRAGGE,

WARDRY METAL WORKS, SALFORD, MANCHESTER.

STAYS FOR METAL & WOOD CASEMENTS

(see opposite page).

When ordering stays for wood casements it is necessary to give the width of the casement and the full size details of the woodwork, both casement and frame; they can be made in other metals than those priced below at proportionate prices.

No. 1, malleable iron, bronzed or dull blacked, fitted up with coinage metal working parts.

No. 2, hammered iron, finished dull bright.

No. 3, coinage metal, plainly filed.

No. 4, coinage metal, polished and toned, or bronzed.

CASEMENT STAYS.																
	1				2				3				4			
Length	1	12	14	16	1	2	14	16	10	12	14	16	1	12	14	16
No.																
90					14/9	15/	15/3	16/								
91					12/9	13/	13/3	14/								
92	2/6	2/9	3/3	3/6	3/	3/3	3/9	4/	3/	3/6	4/6	5/6	4/	4/6	5/6	6/6
93	1/9	2/	2/6	3/	3/	3/3	3/9	4/	2/6	3/	4/	5/	3/6	4/	5/	6/6
94	Not a Malleable Iron								4/6	5/	6/6	8/	5/6	6/	7/6	8/6
95	2/6	2/9	3/3	3/6	3/	3/3	3/9	4/	3/6	4/	5/	6/	4/6	5/	6/	7/6

NOTE. Cheaper Iron Stays than those priced above can be used of ordinary stock patterns, but they are lighter and have all working parts in iron, they are not recommended.

Special designs will be submitted or quoted for, or architects own designs will be carried out and reserved if desired.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C

STAYS AND :
FASTENINGS :
FOR METAL OR
WOOD ~~AND~~
CASEMENTS



DETAILS ABOUT
HALF FULL SIZE

CAN BE MADE IN:
VARIOUS METALS

GEORGE WRAGGE, WARDRY METAL WORKS, SMITHS MANCHESTER.

The Elevations on opposite page show the various Casements constructed in this office, and will be of assistance when ordering. Below is given a list of the pages on which each Casement is drawn in section, with details as to rebates, etc., etc.

No. 2	ELEVATION, opening	OUTWARDS.....	see pages	9, 11, 21, 23, 31
No. 7	do.	do.	INWARDS.....	do. 13, 25
No. 5	do.	do.	OUTWARDS IN PAIRS..	do. 19
No. 4	do.	do.	ON CENTRES.....	do. 15, 29
No. 6	do.	do.	OUTWARDS FROM HEAD	do. 9, 11, 21, 23, 31
No. 9	do.	do.	INWARDS FROM CILL..	do. 17, 27

Hopper Casements & Sliding ditto for churches, schools, etc., see opposite page, Elevations Nos. 3, 8 & 12.
Fitted with pulleys and eyes to work by cords

Hopper Casements, either from Nos. 2 & 8				Sliding Casements, Fitted on No. 12			
Height	Width	No. 12	No. 8	Height	Width	No. 12	No. 8
Under 2ft.	2ft. & under	21/-	18/-	Under 2ft.	2ft. & under	20/-	17/-
2ft. & under 2ft. 6	" "	22/-	19/-	2ft. & under 2ft. 6	" "	21/-	18/-
2ft. 6 " 3ft.	" "	23/-	20/-	2ft. 6 " 3ft.	" "	22/-	19/-
3ft. " 3ft. 6	" "	25/-	22/-	3ft. " 3ft. 6	" "	24/-	21/-

NOTE. Hopper casements, from No. 3, and sliding casements, elevation No. 12, will be fitted with copper casement for interior frame) at an extra cost, as follows.—Under 2ft. high, 20/-; 2ft. and under 2ft. 6 in., 21/-; 2ft. 6 in. and under 3ft., 22/-; 3ft. and under 3ft. 6 in., 23/-; 3ft. 6 in. and under 4ft., 25/-.

POLICE CELL WINDOWS & Outside Grilles (see opp. page), Elevation Nos. 10-11.
These two forms of cell windows have both been made for various Councils in Yorkshire, Cheshire, and other counties. They are both made of 14 No. 16 section sash bars, see page 53) with double flagged outer frame, No. 16 section, and fitted with wrought iron inlet bars 1in. x 3in., with lugs to land in 3in. long. The outer grilles are made in wrought iron, having frame and horizontal bars of 3in. x 3in. section, and verticals of 2in. square, set diagonally, with 3in. lugs to land in.

Cell Windows with Casement, No. 12 Elevation	Outside grilles (see opp. page)	Cell Windows with Casement, No. 11 Elevation	Outside grilles (see opp. page)
2ft. 3in. to crown x 2ft. to spring x 6 in. 4 55/- each	4/- each.	1ft. 9in. high x 1ft. wide, " " each	22/6 each.

See also opposite page for other forms and sizes.

STABLE SASHES (see opposite page), No. 14. Elevation.

These sashes are strongly recommended, they are made of 13in. steel sash bar, No. 16 section (see page 53), to glaze inside and fitted with hopper casement with solid side cheeks (to prevent draught) having cast metal hook spring catch. 2ft. 6in. high x 3ft. wide in 12 squares, at 52/- EXTRA if galvanised 8/- each.
See also opposite page for other forms and sizes.

VERTICAL CENTRE HUNG CASEMENTS (see Elevation No. 1).

Made in two sections and two qualities.

No. 1 **QUALITY** Casements are fitted with coarsage metal handle No. 24 (see page 37), and stay with 2 pins No. 92 (see page 47), plainly filed, and hung on coarsage metal centres.

No. 2 **QUALITY** Casements have similar fittings, but in malleable iron.

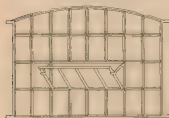
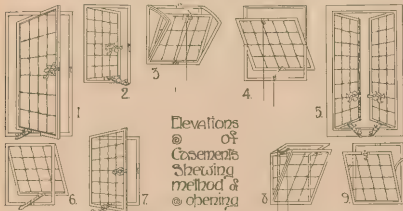
Vertical centre hung Casements, see Elevation No. 1, opposite page.					
Section No. 12, page 28.				Section No. 22, page 14.	
Height.	Width	Quality 1	Quality 2	Quality 1	Quality 2
2ft. and under	2ft. & under	35/-	34/-	55/-	54/-
Over 2ft. & under 2ft. 6	" "	37/-	36/-	57/-	56/-
2ft. 6in. and under 3ft.	" "	39/-	38/-	59/-	58/-
3ft. and under 3ft. 6in.	" "	41/-	40/-	61/-	60/-
3ft. 6 and under 4ft. 6	" "	44/-	43/-	64/-	63/-
4ft. 6in. and under 5ft.	" "	" "	" "	67/-	72/6
5ft. to 6ft.	" "	" "	" "	82/6	80/-

NOTE. Casements 4ft. 6in. and upwards are fitted with side bolt fastenings as described on page 7 to Nos. 2 and 3 quality casements. Prices of Louver Lights, see Elevation 13, on application. For complete list of EXTRAS, see page 54. Fittings as described on page 54.

Wardry metal
works Salford
Manchester

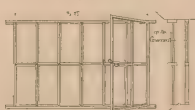
GEORGE WRAGGE

22 Surrey St
Strand
London W.C



Police Cell Window as made for various County Councils

1 inch scale



Police Cell Window as adopted by many County Councils

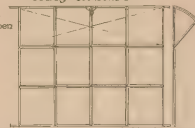


Sliding Sash

12.



Fever Hospital window with secret opening gearing



1 inch scale

14.

Stable Window with Hopper vent galvanized

GEORGE WRAGGE,
WARDRY METAL WORKS, SALFORD,
MANCHESTER.

GEARING.

This is a special and big department at my works. Many of the large modern public buildings are fitted up with my gearing.

GEARING for ranges of Lantern and other Lights opening in every form,
GEARING for Fanlights,
and suitable for Metal or Wood Casements.

All vertical and horizontal rods are of PLANISHED STEEL, while the arms, brackets, guides, &c., &c., are of malleable iron, carefully machined and fitted, all joints being rivetted with BRONZE pins.

The regulators are of coinage metal, with specially hard metal cogs and working parts, while the ends of vertical rods are lathe cut, square-threaded, of quick pitch.

Drawings and estimates submitted on receipt of specification and quantities.

NOTE. The patent gearing of other makers will be fitted to our metal casements if desired.

SASHES.

.....
IN WROUGHT STEEL, IRON,
& GUN METAL.
.....

See other side for full description.

GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

SECTIONS OF WROUGHT STEEL & IRON SASHES.

WROUGHT SASHES are now used almost exclusively in place of Cast.

They are invariably cheaper.

They take up less daylight.

They can be better adapted to varying sizes and shapes.

They do not break through settlement of building.

The opening lights can be better fitted.

All joints are mitred by machinery (see page 55), and are interlocked.

Any form of Casement shewn in this Catalogue can be fitted to these Sashes.

Any shape of window can be made (see page 55).

Quick delivery can be given (from 5,000 to 10,000 superficial feet of these Sashes are sent out WEEKLY).

The bulk of the sections illustrated on opposite page are kept in stock, in many cases the rolls are my own property (thereby ensuring well-rolled material), and some of the sections are registered.

Rolls will be turned for special sections.

All material for these Sashes and Casements is English rolled.

For prices see page 54.

Wardry metal
works Salford
Manchester

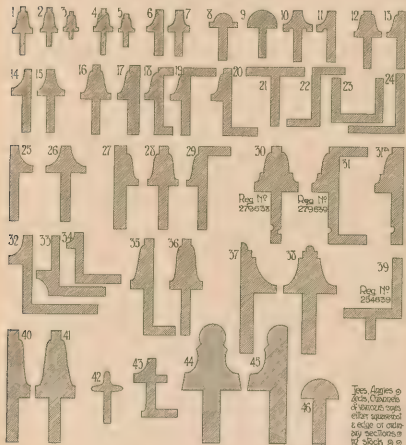
GEORGE WRAGGE

22 Surrey St
Strand
London W.C

Rolls turned
for special
sections :

Wrot Steel
and iron
sections
for window
frames ●

Full size ●
● details



GEORGE WRAGGE, WARDRY METAL WORKS, SALFORD, MANCHESTER.

It is desired that a specification and set of quantities be sent for special quotation. Owing to the varying sizes, sections, forms of casements, and area of the panes, it is impossible to give a complete price list. The prices given below will however be a guide.

The larger the area of sash and the fewer the panes, the lower the price; they have been made frequently as low as 5d. per sup. foot (see below) 10ft. x 8ft., in 16 squares.

Sashes similar to elevation No. 15 (opposite page) but with square head and without casement	Sections Nos. 10 & 11.	Sections Nos. 16 & 17, 1 1/2 in.	Sections Nos. 20 & 21, 2 in.
4ft. high x 2ft. 6in. wide in 4 sqrs.	11d	1/-	
4ft. high x 2ft. 6in. wide in 6 sqrs.	1/-	1/11d	
6ft. high x 4ft. wide in 12 squares	8d	9d	1/-
6ft. high x 4ft. wide in 16 squares	10d	1/10d	1/2/-
8ft. high x 5ft. wide in 12 squares		6d	9d
8ft. high x 5ft. wide in 20 squares		8d	11d
10ft. high x 8ft. wide in 16 squares		5d	7d
10ft. high x 8ft. wide in 30 squares		6 1/2d	8 1/2d

NOTE. The superficial area is calculated by measuring the extreme height by the width (exclusive of lugs).

In ordering it is necessary to state whether to glaze from outside or inside; if the latter method is adopted re-glazing can be inexpensively done. In all cases the sashes are drilled for pegs to hold glass in position until the mastic sets (whether glazing inside or out).

EXTRAS.

Casements to swing on centres, say 2ft square, fitted with pulleys and eyes for cords, from 12/6, each according to section of bar. Casements to fall back from cill, from 15/6 each. Casements can be made to take out for cleaning purposes. Special quotation will be given on receipt of specification and quantities.

NOTE. Rod or other gearing can be fitted to these casements (see page 50).

Segmental or semi-circular heads to sashes of sections up to and including 1 1/2 in. and up to 4ft. 6in. wide, 2/6 each; if of 2in. section, 3/-; if over 4ft. 6in. wide, up to say 8ft., 3/6 and 4/6 respectively.

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C

Some forms of
windows in wrought
steel with milled joints
and in cast iron



15



16



17



18



19



20



21



22



23

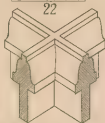


24



25

Section
full size



Showing
how a
joint
is formed

26



27



28



29



30



31

Special Quotations
on receipt of a
specifications
and quantities

32



33

Any form of
opening casements
can be fitted to
these frames

METAL WORK.

In iron, copper, brass, bronze, aluminium, &c., &c.,
Hammered or Cast.

Designs & prices will be posted on application.

.....
Gates & Grylles.

Vanes & Terminals.

Balustrades & Newels.

Hinges & Door Furniture.

Hanging Signs & Boards.

Dog Grates.

Fenders & Irons.

&c., &c.

Chancel Screens.

Altar Rails & Standards.

Lecterns, Reading Desks.

Font Covers.

Communion Plate.

Lamps & Candlesticks.

Ecclesiastical Door Fittings.

&c., &c.

.....
Repousse Work in pewter, lead, copper, &c.

Memorial Tablets & Engraved Plates.

.....
Gas & Electric Light Fittings,

In brass, copper, aluminium, iron, &c.

.....
LEADED LIGHTS.

Specimens, designs & prices on application.

GEORGE WRAGGE

Wrought metal
works Salford
Manchester

22 Surrey St
Strand
London W.C.

PARK AND ENTRANCE GATES

No 500





GEORGE WRAGGE

Wrought metal
works Salford
Manchester
22, Sunney St
Strand
London W.C.

Nº 114

GATES & GRILLES
CHANCEL SCREENS

ALIAS RAILS &
STANDARDS

DOG GRATES
FENDERS & IRONS

RAILINGS & AND
BALUSTRADES

GAS & ELECTRIC
LIGHT FITTINGS

VANES
TERMINALS

GEORGE WRAGGE

Wardro metal
works Salford
Manchester



22 Surrey St
Strand
London W.C.



STAIR
BALUSTERS
NEWELS &
HANDRAILS
STAIR RAILING



Nº 800

& PANELLING
IN HAMMERED
IRON, BRONZE,
COPPER &
ALUMINIUM ETC



Nº 801



Nº 802



Nº 803



Nº 804



GEORGE WRAGGE

Wardle metal
works Salford
Manchester

22 Surrey St
Strand
London W.C.

VANES & TERMINALS
IN HAMMERED IRON
BRONZE OR OTHER
NONCORROSIVE METAL




Engraved
Wrought

No 707



GEORGE WRAGGE

Wrought metal
works Salford
Manchester
22 Sturges St
Strand
London W.C.

DOG GRATES AND OTHER:
FORMS IN HAMMERED IRON
STEEL, BRONZE, COPPER, :
KRONAND ETC. 

IRONS, BRASSES, AND DOGS
FENDERS AND KERBS. :
HOODS IN VARIOUS METALS

Nº 400

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C



Nº 300



Nº 301



Nº 302



DOOR FURNITURE
IN BRONZE, COPPER,
BRASS, PEWTER,
ALUMINUM ETC



Nº 304



Nº 305



ABOUT HALF
FULL SIZE

Nº 303



Nº 306



Nº 307



Nº 308

EDGE
WOOD

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C



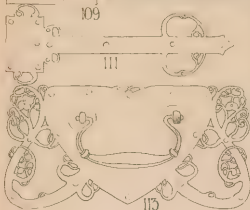
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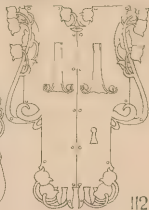
110

CABINET :
METAL WORK
IN COPPER
BRASS IRON
ALUMINUM ETC

HALF
FULL
SIZE



113



112

111

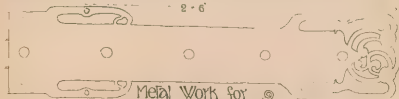


Wardry metal
works Salford
Manchester

GEORGE WRAGGE

22 Surrey St
Strand
London W.C

2-6



114

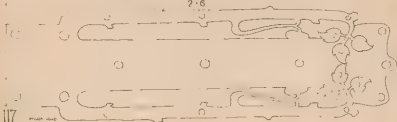
Metal Work for
Domestic and
Ecclesiastical purposes



115

116

2-6



117

Wardry metal
works Salford
Manchester

GEORGE WRAGGE

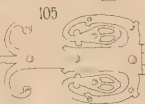
22 Surrey St
Strand
London W.C



Door Furniture
in wrought metal



about half
full size



GEORGE

Wardly metal
works Salford
Manchester



WRAGGE

22 Surrey St
Strand
London W.C.

Pillar, Hanging Signs
and other varieties
in wood or metal. @
Name Plates @
Billboard Signs etc

In Bronze @ @ @
Aluminium etc
both cast, wrought,
engraved or @
@ repousse:



GEORGE WRAGGE

Ward's metal
works Salford
Manchester

22 Surrey St
Strand
London W.C.

№ 600

CHANCEL SCREENS
AND GATES

COMMUNION RAILS
AND LECTERNS

READING DESKS
& FONT COVERS

COMMUNION
COPPER PLATE ETC

GEORGE WRAGGE

Wardro metal
works Salford
Manchester



22 Surrey St
Strand
London W.C.



REPOUSEE AND BEATEN WORK IN
PEWTER, LEAD, BRASS, COPPER, & OTHER
METALS FOR VARIOUS PURPOSES



Nº 800



GEORGE WRAGGE

Ward's Metal
works Salford
Manchester
22 Surrey Street
Strand
London W.C.

GAS FITTINGS TO
SPECIAL DESIGNS
IN ANY METAL:
WROUGHT OR CAST

Nº 801



Nº 802



Nº 803

Nº 804



Nº 805



Nº 806

Nº700



GEORGE WRAGGE

Ward's metal
works Salford
Manchester

22 Surrey St
Strand
London W.C.

ELECTRIC LIGHT FITTINGS IN A
VARIETY OF METALS EITHER
HAMMERED OR CAST

Nº701



Nº702



Nº703



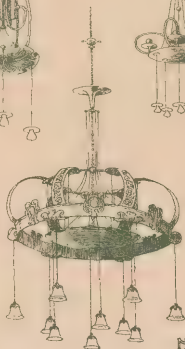
Nº704



Nº705



Nº706



GEORGE WRAGGE

Ward's metal
works Salford
Manchester
22 Suncey St
Strand
London W.C.

HANGING LAMPS
TABLE LAMPS
BRACKET LAMPS
& OTHER SPECIAL
FORMS IN BRONZE
BRASS HAMMERED
IRON & VARIOUS
MATERIALS & IN
GLASS & SHADES
AS WELL AS SPECIAL
DESIGN & COLOUR



CANDLESTICKS
CANDELABRA
CANDLE VESSELS
SCONCES AND
OTHER FORMS
IN BRONZE
BRASS
HAMMERED
IRON ETC ETC
SHADES & SPECIAL
DESIGN & COLOUR

GEORGE
WRAGGE

GEORGE WRAGGE

Ward's metal
works Salford
Manchester
22 Surrey St
Strand
London W.C.

MEMORIAL &
TABLETS IN
VARIOUS
FORMS IN BRASS
BRONZE &
ALUMINIUM
COPPER SILVER
ETC & WITH ENAMELS



NAME PLATES
ENGRAVED :
CAST OR
REPOUSSE
IN ANY METAL
DESIGNS
SUBMITTED
FOR APPROVAL

LEADED LIGHTS & STAINED GLASS.

When Casements are being used and leaded work is required, it is advisable that the Maker of the former should provide the latter (if his design and craftsmanship be satisfactory), and also do the glazing; delays, wrong sizes, &c., &c., would thereby to a great extent be avoided.

I have a capable staff of Fixers & Glaziers and shall be pleased to give estimates for this portion of the work, as also to submit designs and examples free of charge.



STAINED GLASS
& LEADED LIGHTS
DESIGNS ON &
APPLICATION:

GEORGE WRAGGE

WARDRY: METAL
WORKS

SALFORD

MANCHESTER:

22 SURREY: STRAND
SCREEN

LONDON: W.C.



METAL: CASEMENTS
AND
FRAMES WROUGHT: IRON

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